

WHAT IS CLAIMED IS:

1. An autofocus control apparatus in an image sensing apparatus that comprises: an optical system including a focus lens; an image sensing unit that photoelectrically converts light incident via said optical system into image signals and outputs the image signals; and a drive unit that drives said focus lens to adjust a focus position, said autofocus control apparatus comprising:
 - a floodlighting unit; and
 - a focus position detector that performs focus position detection according to an active system and focus position detection according to a passive system on the basis of the image signals obtained from said image sensing unit.
2. The autofocus control apparatus according to claim 1, wherein said focus position detector, at the time of focus position detection according to the active system, acquires first image signals with said image sensing unit performing floodlighting with said floodlighting unit, acquires second image signals with said image sensing unit without performing the floodlighting with said floodlighting unit, and detects a focus position on the basis of differential signals between the first image signals and the second image signals.

3. The autofocus control apparatus according to claim
2, wherein said focus position detector, at the time of
focus position detection according to the passive
5 system, acquires image signals with said image sensing
unit for a plurality of focus positions by driving said
focus lens by said drive unit within a predetermined
range whose center is the focus position detected on
the basis of the differential signals, acquires focus
10 states of the respective focus positions on the basis
of image signals sensed at the respective positions,
and detects a focus position again on the basis of the
focus states.

15 4. The autofocus control apparatus according to claim
2, wherein said focus position detector, at the time of
focus position detection according to the active system,
detects an object which has a luminance equal to or
more than a predetermined luminance and a size equal to
20 or less than a predetermined size based on the
differential signals, and detects a focus position on
the basis of the detected object.

5. The autofocus control apparatus according to claim
25 4, wherein, in a case where a plurality of objects are
detected, a focus position is detected on the basis of
an object having a maximum luminance.

6. The autofocus control apparatus according to claim
2, wherein the first image signals are obtained from a
predetermined partial area of said image sensing unit,
5 and the differential signals are of the predetermined
partial area.

7. The autofocus control apparatus according to claim
6, wherein said focus position detector, prior to the
10 detection of the focus position, adds differential
signals of the predetermined partial area in a
predetermined direction to acquire one-dimensional
added differential signals, and detects the focus
position on the basis of the added differential signals.

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8. The autofocus control apparatus according to claim
2, wherein the first image signals are of a
predetermined one row or one column of said image
sensing unit, and the differential signals are of the
20 one row or one column.

9. The autofocus control apparatus according to claim
2 further comprising a control unit that prohibits
output of the first image signals to a display unit.

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10. The autofocus control apparatus according to claim 9 further comprising a unit that controls information indicating acquisition of the first image signals,

wherein said control unit controls to prohibit the
5 output of the first image signals to said display unit according to the information.

11. The autofocus control apparatus according to claim 2 further comprising:

10 a first memory that stores the first image signals; and

a second memory that stores the second image signals,

wherein said second memory is connected to a
15 display unit, and said first memory is not connected to said display unit.

12. The autofocus control apparatus according to claim 2, wherein said floodlighting unit irradiates an

20 infrared ray, and said image sensing unit is covered by a color separation filter, and

the first image signals are of pixels of said image sensing unit that corresponds to a color element with a high transmissivity of an infrared ray among
25 color elements of said color separation filter.

13. The autofocus control apparatus according to claim 2, wherein said floodlighting unit irradiates an infrared ray, and said image sensing unit is covered by a color separation filter, and

5 image signals outputted from said image sensing unit are corrected to acquire the first image signals according to sensitivity of each color element of said color separation filter with respect to an infrared ray.

10 14. An autofocus control method in an image sensing apparatus that comprises: an optical system including a focus lens; an image sensing unit that photoelectrically converts light incident via said optical system into image signals and outputs the image
15 signals; and a floodlighting unit, said autofocus control method comprising:

 performing focus position detection according to an active system on the basis of the image signals obtained from said image sensing unit; and

20 performing focus position detection according to a passive system on the basis of the image signals obtained from said image sensing unit.

15. The autofocus control method according to claim 14,
25 wherein, in performing the focus position detection according to the active system,

acquiring first image signals with said image sensing unit performing floodlighting with said floodlighting unit;

acquiring second image signals with said image sensing unit without performing the floodlighting with
5 said floodlighting unit; and

detecting a focus position on the basis of differential signals between the first image signals and the second image signals.

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16. The autofocus control method according to claim 15, wherein, in performing the focus position detection according to the passive system,

acquiring image signals with said image sensing
15 unit for a plurality of focus positions within a predetermined range whose center is the focus position detected on the basis of the differential signals;

acquiring focus states of the respective focus positions on the basis of image signals sensed at the
20 respective positions; and

detecting a focus position again on the basis of the focus states.

17. The autofocus control method according to claim 16,
25 further comprising focusing on the re-detected focus position by driving said focus lens.

18. The autofocus control method according to claim 15, wherein, in performing the focus position detection according to the active system,

detecting an object which has a luminance equal to
5 or more than a predetermined luminance and a size equal to or less than a predetermined size based on the differential signals; and

detecting a focus position on the basis of the detected object.

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19. The autofocus control method according to claim 18, wherein, in a case where a plurality of objects are detected in performing the focus position detection according to the active system, a focus position is
15 detected on the basis of an object having a maximum luminance.

20. The autofocus control method according to claim 15, wherein the first image signals are obtained from a
20 predetermined partial area of said image sensing unit, and the differential signals are of the predetermined partial area.

21. The autofocus control method according to claim 20,
25 wherein; in performing the focus position detection according to the active system, prior to the detection of the focus position,

adding differential signals of the predetermined partial area in a predetermined direction to acquire one-dimensional added differential signals; and

detecting the focus position on the basis of the
5 added differential signals.

22. The autofocus control method according to claim 15, wherein the first image signals are of a predetermined one row or one column of said image sensing unit, and
10 the differential signals are of the one row or one column.

23. The autofocus control method according to claim 15 further comprising prohibiting output of the first
15 image signals to a display unit.

24. The autofocus control method according to claim 23 further comprising

adding information indicating acquisition of the
20 first image signals; and

controlling to prohibit the output of the first image signals to said display unit according to the information.

25 25. The autofocus control method according to claim 15 further comprising:

storing the first image signals in a first memory that is not connected to a display unit; and

stores the second image signals in a second memory that is connected to the display unit.

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26. The autofocus control method according to claim 15, wherein said floodlighting unit irradiates an infrared ray, and said image sensing unit is covered by a color separation filter, said method further comprising

10 acquiring the first image signals from signals of pixels of said image sensing unit that corresponds to a color element with a high transmissivity of an infrared ray among color elements of said color separation filter.

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27. The autofocus control method according to claim 15, wherein said floodlighting unit irradiates an infrared ray, and said image sensing unit is covered by a color separation filter, said method further comprising

20 acquiring the first image signals by correcting image signals outputted from said image sensing unit according to sensitivity of each color element of said color separation filter with respect to an infrared ray.

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